



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 2
290 BROADWAY
NEW YORK, NY 10007-1866

NOV 27 2018

CERTIFIED MAIL-RETURN RECEIPT REQUESTED

Article Number: 7018 0680 0001 1668 4949

Michael Thorne, Superintendent of Public Works
City of Ithaca
525 Third Street
Ithaca, NY 14850

Re: Sanitary Sewer System Compliance Evaluation Inspection
SPDES Tracking No. NY0026638

Dear Mr. Thorne:

As part of a joint effort between the United States Environmental Protection Agency (EPA) and the New York State Department of Environmental Conservation (NYSDEC), we conducted a Sanitary Sewer System (SSS) Compliance Evaluation Inspection (CEI) of your facility on September 27, 2018.

The principal purpose of this SSS CEI was to assess your system's adequacy in minimizing the discharge of sanitary sewer overflows (SSOs). Based on the information provided during the CEI, the City of Ithaca has experienced at least eight SSOs from its SSS since 2015. The attached CEI report contains "Areas of Concern." Within **thirty (30) calendar days of receipt of this letter**, please provide a written response to EPA that describes how the City has or will address each of these Areas of Concern, including any written documents developed or updated in response to the CEI findings. Please submit your response to the following addresses:

Larry Gaugler, P.E.
NPDES Team Leader
Water Compliance Branch
Division of Enforcement and Compliance Assistance
USEPA Region 2 - Floor 20
290 Broadway
New York, NY 10007

and

Acting Director, Bureau of Water Compliance Programs
Division of Water
NYSDEC
625 Broadway
Albany, NY 12233

Additionally, during the CEI, EPA requested documentation of the closure of pump station outfalls 003, 004 and 006. Please submit this documentation with your response.

Internet Address (URL): <http://www.epa.gov>

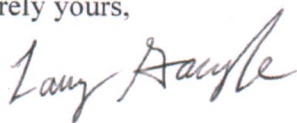
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Please note that overall compliance by your collection system will continue to be reviewed by NYSDEC and any questions or issues related to your compliance should be addressed directly to NYSDEC. Any questions or information related to this inspection should be directed to EPA along with a copy to NYSDEC.

I am enclosing a copy of our inspection findings for your files. If you have any questions concerning the inspection, please feel free to contact me at (212) 637-3950 or gaugler.larry@epa.gov, or you may contact Ms. Katherine Mann at (212) 637-4226 or mann.katherine@epa.gov.

Additionally, further guidance and information concerning the control of SSOs may be found by accessing the following EPA web site: http://cfpub.epa.gov/npdes/home.cfm?program_id=4.

Sincerely yours,



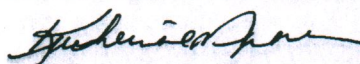
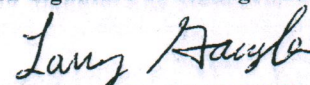
Larry Gaugler, P.E.
NPDES Team Leader
Water Compliance Branch

Enclosure

cc: Edward Hampston, P.E., NYSDEC
Thomas Vigneault, P.E., Regional Water Engineer, NYSDEC Region 7 (pdf)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, REGION 2
Division of Enforcement and Compliance Assistance
Water Compliance Branch

Clean Water Act (CWA) Inspection Report

Program: Sanitary Sewer System		Inspection Type: Compliance Evaluation Inspection	
Permittee Name: City of Ithaca		NPDES/ICIS No.: NY0026638	
Inspection Entry Date: September 27, 2018		Inspection Exit Date: September 27, 2018	
Inspection Entry Time: 9:20 AM		Inspection Exit Time: 2:30 PM	
Facility Inspected: City of Ithaca SSS 510 First Street Ithaca, NY 14850		Lat, Long: 42.448505, -76.504474 NAICS / SIC Code: 4952	
EPA Representative(s): Katherine Mann, Physical Scientist, Water Compliance Brach, DECA, USEPA Region 2			
State Representative(s): N/A			
On-Site Facility Representative(s): Mike Thorne, P.E., Superintendent of Public Works Erik Whitney, P.E., Assistant Superintendent of Public Works Scott Gibson, Environmental Engineer James Lauper, Supervisor of Wastewater Collection Systems			
Responsible Official: Mike Thorne, P.E., Superintendent of Public Works			
Name and Signature of Inspector		Agency/Office/Phone Number	Date
 Katherine Mann, Physical Scientist		USEPA/R2/DECA-WCB/ 212-637-4226	11/26/18
Name and Signature of Management QA Reviewer		Agency/Office/Phone Number	Date
 Larry Gaugler, P.E., NPDES Team Leader		USEPA/R2/DECA-WCB/ 212-637-3950	11/27/18

I. BACKGROUND AND FINDINGS

1. On September 27, 2018 the United States Environmental Protection Agency (EPA), Region 2, conducted a Sanitary Sewer System (SSS) Compliance Evaluation Inspection (CEI) of the City of Ithaca (the "City") SSS to assess the adequacy of the system's minimization of the release of sanitary sewage.
2. The City's SSS conveys flow to the Ithaca Area Wastewater Treatment Facility (IAWWTF), SPDES No. NY0026638, which has a permitted flow rate of 13.1 MGD. According to Town representatives, average dry weather flow through the IAWWTF is 4.5 MGD with a peak flow rate of 7 MGD. During wet weather, peak flows at the IAWWTF can reach 32 MGD.
3. The IAWWTF is jointly owned by the City (50%), the Town of Ithaca (2%) and the Town of Dryden (48%). Percent ownership is currently determined based on water usage.

4. The IAWWTF serves a population of approximately 35,000 when school is in session.
5. Upstream contributors of flow to the City's SSS include the Town of Ithaca, the Town of Dryden and Cornell University.
6. The City has approximately 85 miles of sanitary sewer. The City's SSS dates back to the late 1800s, and the majority was constructed prior to 1950. Pipe materials consist of clay tile (45%), transite (21%), PVC (21%) and cast iron. Sewer mains range between 6" and 40" in diameter.
7. The City has a comprehensive GIS map of its SSS, which includes, among other things, pipe diameters, pipe materials, year constructed, pump stations, manholes, lateral information, as well as the locations of SSS breaks, blockages, and repairs.
8. There are 11 City-owned and operated pump stations that convey flow through the City's SSS. The City checks the pump stations daily and cleans them as needed. The pump stations are equipped with sound and light alarms and have couplings to set up emergency bypass pumping if necessary. The City has trailer-mounted generators that are available during power outages. The pump stations are not equipped with flow meters. The City monitors flow based on pump run times and provided copies of weekly hour readings at each of the pump stations from September 2016 – September 2018.
9. The City does not currently meter flow throughout the SSS. City representatives stated that there are 14 existing meters at municipal boundaries, but these are mostly defunct. At the time of the CEI, the City was seeking to obtain 15 solar powered meters to replace these boundary meters. Thereafter, the City hoped to meter the flow at its pump stations and eventually conduct an Infiltration & Inflow (I&I) study of its collection system.
10. During the CEI, the City provided copies of SSS records documenting SSOs, including Incident Reports for NY-Alert, sewer stoppage reports, and Reports of Noncompliance to the NYSDEC. Based on the records provided, the City has experienced the following SSO events from its SSS since 2015:

Year	Date	Location	Cause	Surface Water Impacted
2015	10/20/2015	Outfall 005 / 822 Clinton St. W.	Blockage in siphon	Cayuga Lake Inlet
2016	2/18/2016	S. Hill Recreation Way	Partial blockage (root ball) and high flows	N/A
2017	2/22/2017	James L Gibbs Dr.	Force main break	Cayuga Lake
	3/27/2017	1001 Cliff St.	Blockage: unknown	N/A
2018	4/6/2018	701-717 Cecil Malone Dr.	Force main break	Flood Control Channel
	4/8/2018	Steward Ave./Willard Way	Blockage: roots	N/A
	6/28/2018	100 Hector St.	Blockage: paper and sludge solids	Cayuga Lake Inlet
	9/6/2018	103 College Ave.	Pipe break caused by anode bag left in place by gas utility	Sixmile Creek

II. FIELD WORK

During the CEI, the EPA and City representatives visited the following locations within the City:

1. Cherry Street Siphon Box / 005 Outfall location
2. Chestnut Apartments (100 Hector St.) SSO location
3. Cecile Malone Dr. SSO location
4. Cherry St. Pump Station
5. Wood St. Pump Station
6. College Avenue SSO locations
7. Siphon box for Sixmile Creek siphon checked for overflow point: none identified.
8. Brick manhole in low-lying area on Pier Rd.

See attached photographs.

III. AREAS OF CONCERN

1. The City's written maintenance procedures available at the time of the CEI do not fully describe its maintenance program. Written operation and maintenance procedures are required under 6 NYCRR Part 750-2.8, which states the following:

"The [SPDES] permittee shall, at all times, properly operate and maintain all disposal facilities, which are installed or used by the permittee to achieve compliance with the conditions of the permit. Proper operation and maintenance also includes as a minimum, the following:

 - (i) a preventive/corrective maintenance program for all critical facilities and systems of treatment and control (or related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of the permit. A facility or system is critical if it contains process equipment that is essential for proper operation and necessary to achieve compliance with the applicable SPDES permit effluent limits; and*
 - (ii) written procedures for operation and maintenance, training new operators, adequate laboratory controls and appropriate quality assurance. This provision requires the operation of installed backup or auxiliary facilities or similar systems only when the operation is necessary to achieve compliance with the conditions of the permit."*
2. The City's SPDES permit requires the submittal of an Annual Sewer System Operation and Maintenance Report to the NYSDEC within 60 days following the close of each reporting period (January 1st – December 31st). The annual report must describe sewer inspection and maintenance activities and the effectiveness of that program, and must assess the effectiveness of the approved I&I elimination program. Copies of the Annual Reports were not available at the time of the CEI, and City representatives indicated that they were not prepared or submitted on a regular basis.
3. The City has not formally evaluated its SSS to identify areas with excessive I&I since the 1980s. The EPA strongly encourages the City to obtain flow meters for its municipal boundaries and pump stations and perform a formal and up-to-date I&I study.

11. The City's SPDES permit includes pump station overflow outfalls at the pump stations located at Lake St./Kline Rd. (003), Ferris Pl./Quay St. (004), Cherry St./Clinton St. (005) and at 321 Elmira Rd. (006). City representatives stated that these outfalls have been permanently closed. The last overflow from one of the pump stations outfalls occurred on 10/20/2015 from Outfall 005. According to City representatives, the overflow pipe at Outfall 005 was severed and plugged in November 2015. This is documented in a November 19, 2015 letter to the NYSDEC. EPA requested closure documentation for the other three (3) pump station outfalls during the CEI.
12. The City maintains a log of calls related to the SSS, documenting the nature of the issue and the City's response. In addition, the City keeps detailed field notes in diaries, which date back to 1984.
13. Based on insurance records provided at the time of the CEI, since 2013, seven (7) claims were made by residents for damages related to sewage backups, and two (2) were paid.
14. The City has a map identifying routine maintenance areas, including jetting areas (jetted every month), grease control areas (NaOH applied every month), and root control areas (chemicals applied on a 3-year cycle). The City also has written preventative maintenance inspection procedures included in its written SSO Emergency Response Procedure. The City's written procedures describe aspects, but do not fully detail, its maintenance program for the SSS.
15. The City has a vacuum truck, jet truck, root cutters, hand rods, camera truck, two push cameras and a track camera.
16. According to City representatives, 2018 upgrades to the SSS included repair of 17 manholes and 2,500 feet of sewer main down E. State St., where 10" clay tile pipe was replaced with 15" PVC. In 2017, the City upgraded 450 feet of sewer main on Renzetti Place from 8" and 12" clay tile pipe to 15" PVC pipe. City representatives stated that generally, about one mile of pipe replacements (including both sanitary and stormwater) per year is achievable for the City. Proactive pipe replacements are driven mainly by road construction / development and not by areas with known I&I issues.
17. City representatives stated that average daily flow at the IAWWTF has decreased, which they attributed to interceptor repairs as well as low flow flush toilets.
18. As previously mentioned, the City plans to install new flow meters at municipal boundary locations sometime in 2019. City representatives stated that they would look at a year's flow cycle to better understand the City's I&I contribution to the IAWWTF. Depending on the results, the next step would be to equip the City's pump stations with flow metering. City representatives estimated that this would not occur until 2021-2022.
19. City representatives stated that residents with sump pumps connected to the sanitary sewer have been sent letters alerting them that they will need to connect to the storm sewer system once it is installed and becomes available to them. City representatives stated that City code prohibits the discharge of sump pumps to the street due to icing.
20. Residents in the City, Town of Ithaca, and Town of Dryden are billed quarterly based on water usage.

IV. OPENING/CLOSING CONFERENCES

1. At the start of the CEI, EPA inspector Mann presented credentials to Mr. Thorne, Mr. Whitney, Mr. Gibson and Mr. Lauper and explained the purpose of the CEI. At the end of the CEI, Ms. Mann held a closing conference and discussed preliminary CEI findings with Mr. Whitney, Mr. Gibson and Mr. Lauper.

V. ATTACHMENT

1. Photographs

ATTACHMENT 1: PHOTOGRAPHS

Photographs taken on 8/27/2018 by K. Mann with Nikon COOLPIX AW130 digital camera.



DSCN2796.JPG – Siphon box next to Outfall 005. The pipe between the siphon box and the storm sewer pipe was severed in Nov. 2015. A solid manhole cover was replaced with the perforated manhole cover and signage to alert the public to notify the City if an SSO is observed.



DSCN2798.JPG – SSO manhole near the Chestnut Hill Apartment complex (100 Hector St.).



DSCN2799.JPG – SSO manhole near the Chestnut Hill Apartment complex – 6" pipe with no/low flow midday. SSO was caused by a blockage of grease and wipes.



DSCN2800.JPG – Cecile Malone Dr. SSO location. SSO was caused by a force main break. Cast iron force main was replaced with ductile iron.



DSCN2805.JPG – Brick manhole on Pier Rd. with some infiltration. This manhole is located at or just slightly above lake level. The City's GIS databased indicated that the SSS at this location is composed of transite pipe installed in 1965.